

WHAT IS CLAIMED:

1 1. A substantially pure polypeptide comprising an amino acid sequence at least
2 70% identical to SEQ ID NO:6, wherein the polypeptide has a G protein-coupled receptor
3 protein activity.

1 2. The polypeptide of claim 1, wherein the amino acid sequence is at least 80%
2 identical to SEQ ID NO:6.

1 3. The polypeptide of claim 1, wherein the amino acid sequence is at least 90%
2 identical to SEQ ID NO:6.

1 4. A substantially pure polypeptide, the sequence of which consists of
2 SEQ ID NO:6.

1 5. A substantially pure polypeptide, the sequence of which consists of
2 SEQ ID NO:6 with up to 30 conservative amino acid substitutions, deletions or insertions,
3 wherein the polypeptide has a G protein-coupled receptor protein activity.

1 6. A substantially pure polypeptide comprising the sequence of SEQ ID NO:6, or
2 a fragment thereof that (a) has a G-protein receptor coupled protein activity or (b) is
3 immunogenic.

1 7. A substantially pure polypeptide encoded by a nucleic acid that hybridizes
2 under high stringency conditions to the sequence of SEQ ID NO:5, wherein the polypeptide
3 has a G protein-coupled receptor protein activity.

1 8. An isolated nucleic acid encoding the polypeptide of claim 1.

1 9. An isolated nucleic acid encoding the polypeptide of claim 4.

1 10. An isolated nucleic acid encoding the polypeptide of claim 5.

- 1 11. An isolated nucleic acid comprising a strand that hybridizes under high
2 stringency conditions to the sequence of SEQ ID NO:5, or the complement of SEQ ID NO:5.
- 1 12. The isolated nucleic acid of claim 11, wherein the nucleic acid encodes a
2 polypeptide having a G protein-coupled receptor protein activity.
- 1 13. The nucleic acid of claim 11, wherein the strand is at least 15 nucleotides in
2 length.
- 1 14. An isolated nucleic acid comprising the sequence of SEQ ID NO:5.
- 1 15. An isolated nucleic acid comprising a sequence encoding the polypeptide of
2 SEQ ID NO:6.
- 1 16. An antibody that specifically binds to the polypeptide consisting of SEQ ID
2 NO:6.
- 1 17. A vector comprising the nucleic acid of claim 8.
- 1 18. A vector comprising the nucleic acid of claim 11.
- 1 19. A vector comprising the nucleic acid of claim 14.
- 1 20. A vector comprising the nucleic acid of claim 15.
- 1 21. A cultured host cell comprising the nucleic acid of claim 8.
- 1 22. A cultured host cell comprising the nucleic acid of claim 11.
- 1 23. A cultured host cell comprising the nucleic acid of claim 14.
- 1 24. A cultured host cell comprising the nucleic acid of claim 15.

1 25. An antibody that specifically binds to the polypeptide of claim 1.

1 26. A method of producing a polypeptide, the method comprising culturing the
2 cultured host cell of claim 21 under conditions that permit expression of the polypeptide in
3 the cell.

1 27. A method for identifying a compound that modulates a G protein-coupled
2 receptor activity, comprising the steps of:

3 a) contacting a polypeptide of claim 1, or a cell transfected with a nucleic acid
4 encoding the polypeptide of claim 1, with a test compound; and

5 b) determining whether the test compound modulates a G protein-coupled
6 receptor activity of the polypeptide or cell,
7 thereby identifying a compound that modulates a G protein-coupled receptor activity.

1 28. A kit comprising the polypeptide of claim 1 and instructions for use in a
2 method of screening.

1 29. A compound isolated by the method of claim 27.

1 30. A pharmaceutical composition comprising the compound of claim 29 as an
2 active ingredient.